

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A unitized pinion seal for mounting between a first member and a second member rotatable relative to the first member, the unitized pinion seal comprising:

a sleeve ~~portion~~ including a first axially extending ring portion covered with an elastomeric seal layer adapted to mount rotationally fixed to the first member, a radially extending portion extending radially outward from an end of said first axially extending ring portion and a second axially extending ring portion extending axially from a radially outer end of said radially extending portion;

a retainer ~~portion~~ having a first axially extending portion slidably mounted to the second axially extending ring sleeve portion of said sleeve in a radial interference fit and having a second portion adapted to mount to the second member, said first axially extending portion having a smaller diameter than said second portion of said retainer; and

a seal ~~portion~~ mounted to said retainer ~~portion~~ and engaging said first axially extending ring portion of said sleeve portion;

wherein said retainer ~~portion~~ is disengaged from said sleeve ~~portion~~ during assembly of said sleeve ~~portion~~ on to said first member.

2. (original) The unitized pinion seal of claim 1 wherein the first member is an axle companion flange and the second member is a carrier/bearing cage.

3. (currently amended) The unitized pinion seal of claim 1 A unitized pinion seal for mounting between a first member and a second member rotatable relative to the first member, the unitized pinion seal comprising:

a sleeve portion adapted to mount rotationally fixed to the first member;

~~a seal portion slidably mounted to the sleeve portion in a radial interference fit and including a retainer portion adapted to mount to the second member;~~
and

wherein the sleeve ~~portion~~ is adapted to install to the first member with a radial interference fit such that the radial interference fit of the seal ~~portion~~ to the sleeve ~~portion~~ creates a greater axial retention load than an axial installation load created by the interference fit of the sleeve ~~portion~~ relative to the first member.

4. (currently amended) The unitized pinion seal of claim ~~[[1]]~~ 3 wherein said seal ~~retainer portion~~ includes a first retainer ring mechanism engaging said sleeve member prior to assembly of said unitized pinion seal to said first member.

5. (currently amended) The unitized pinion seal of claim 4, wherein said retainer ~~portion~~ mechanism includes a first second retainer ring engaging ~~[[a]] the~~ seal body and a second retainer ring engaging said sleeve portion prior to assembly of said unitized pinion seal to said first member.

6. (currently amended) A method of installing a pinion seal to a carrier/bearing cage and an axle companion flange, the method comprising the steps of:

assembling a sleeve ~~portion~~ of the pinion seal to a retainer seal-portion of the pinion seal with a radial interference fit between cooperating axially extending portions of said sleeve and said retainer, said retainer supporting a seal in engagement with said sleeve;

assembling the pinion seal to the carrier/bearing cage;

partially installing the axle companion flange into the sleeve ~~portion~~ while generating less axial installation force between the axle companion flange and the sleeve ~~portion~~ than an axial retention load created by the interference fit between the ~~seal-portion~~ retainer and the sleeve ~~portion~~; and

further installing the axle companion flange into the sleeve ~~portion~~ while preventing further axial movement of the sleeve ~~portion~~ relative to the companion flange, to thereby overcome the axial retention load and move the sleeve ~~portion~~ axially relative to the seal ~~portion~~ and out of radial interference fit with said retainer.

7. (currently amended) A unitized pinion seal for mounting between a first member and a second member rotatable relative to the first member, the unitized pinion seal comprising:

a sleeve ~~portion~~ adapted to mount rotationally fixed to the first member, said sleeve including an outer surface having a ramp portion disposed between an axially extending forward cylindrical portion and an axially extending rear cylindrical portion, wherein said axially extending forward cylindrical portion has a smaller diameter than said axially extending rear cylindrical portion; and

a seal ~~portion~~ supported by a retainer which includes a first axially extending portion which is mounted to an axially extending surface of the sleeve ~~portion~~ in a radial interference fit and said retainer including a second portion ~~retainer-portion~~ adapted to mount to the second member, said seal ~~portion~~ including a first seal lip engaging said axially extending forward cylindrical portion and a second seal lip engaging said axially extending rear cylindrical portion.